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IMPERIAL MYCOLOGICAL INSTITUTE 19 JAN 1944

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ROMA — STABILIMENTI TIPOGRAFICI CARLO COLOMBO

The radio communiqués of the International Institute of Agriculture are transmitted between 3.10 and 3.20 p. m. on the following days: Monday, Italian; ***Tuesday,*** French; ***Wednesday,*** English; ***Thursday,*** German; ***Friday,*** Spanish.

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The hour of broadcasts is Central European Time, which is one hour ahead of Greenwich Mean Time and 5 hours ahead of Eastern Standard Time in the United States.

ACTIVITY OF THE INTERNATIONAL INSTITUTE OF AGRICULTURE

Permanent Committee (Session of December 1942). — On December 14 1942, the Permanent Committee of the International Institute of Agriculture held its last meeting of the year; Baron Giacomo Acerbo presided. The meeting was attended by the representatives of the following countries: Argentine, Bulgaria, Chile, Colombia, Denmark, Finland, Germany, Hungary, Iran, Ireland, Italy, Italian East Africa, Libya, Italian Islands of the Aegean, Japan, Paraguay, Romania, Slovakia, Spain, Switzerland. The Delegate of Sweeden had notified his inability to attend the meeting.

The Delegates expressed their utmost satisfaction at the way in which the administrative and technical services of the Institute have accomplished their respective work intended to continue and keep up-to-date their ordinary documentary studies, while preparing at the same time the new programme of work indicated by the Permanent Committee in view of the direct participation of the Institute to the initiatives and practical activities which will be imposed by the resumption of international collaboration.

The Permanent Committee expressed its satisfaction also at the editorial activities of the Institute and at the constantly increasing interest in its publications shown by the greatest agricultural centers and by many Governments.

In this Session the Institute programme of work for the year 1943 was examined and approved after a thorough discussion.

Royal Audience. — H. M. Victor Emmanuel III received the Members of the Permanent Committee and the Secretary General of the Institute, assembled in Roms for the winter session of the Committee. The President, Baron G. Acerbo, introduced the delegates of the twenty countries represented at this session, and presented to the Sovereign the most important publications issued by the Institute in 1942, assuring His Majesty, at the same time, of the constant devotion of the Institute for its August Founder and Protector. His Majesty accepted the homage and personally entertained the delegates congratulating with them for the regular and intense activity displayed by the Institute in this difficult period of international relations and in view of the big tasks awaiting it after the conclusion of peace.

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INTERNATIONAL BULLETIN OF PLANT PROTECTION

1943 No. 1

DISCOVERIES AND CURRENT EVENTS *

SPAIN.

Control of *Aelia rostrata* in Andalusia †

The marshy plains of Guadalquivir which cover an extensive zone in the district of Jerez de la Frontera (Cadiz), constitute a permanent breeding ground for *Aelia rostrata* which propagate on wild plants and later spread into the neighouring wheat fields.

Owing to the alarming increase in attack, Prof. M. Benlloch carried out, in June, 1942, an experiment with a view to substituting the old method of destroying, by fire, the weeds and wood plants infested with this hemipter, by spraying with a 3 ½-4 °/₀₀ aqueous solution of sodium cyanide.

With spraying it was possible to destroy the larvae and nymphs as well as the adult insects, with this advantage over the burning method, that the cyanide solution penetrates into the dry cracks in the ground (clayey) where the insects take refuge with the result that a large number escape destruction by fire.

The cyanide solution is applied by means of a long tube with a finely pierced spray nozzle, similar to the type formerly used for applying gasolene against the Moroccan locust (*Dociostaurus maroccanus*).

ITALY.

Plant Pathology Notes §

Restoration of groves destroyed by ' mal secco ' with the ' Monachello ' lemon. As is known at present, in the lemon groves severely attacked or destroyed by ' mal secco ' (*Deuterophoma tracheiphila* Petri), the ' Monachello ' variety is grafted onto the bitter orange.

Experiments up to date have proved that this variety produces excellent ' verdelli ' (a summer variety of lemon with a greenish rind) in a shallow soil

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the official correspondent of the International Institute of Agriculture, Sr. José del Cañizo, Agricultural Engineer, Bachelor of Natural Science, Station of Phytopathology, Madrid, Spain.

§ Communication from the Royal Station of Plant Pathology, Rome, official correspondent of the International Institute of Agriculture.

with a coarse texture and, therefore, that it is very suitable for the Province of Messina where the properties of the soil promote appreciably its productiveness. In general, the ' Monachello ' variety does not seem suitable for the regeneration of citrus groves in other Sicilian zones where the soil is compact and clayey and not adapted for the production of ' verdelli '.

As regards its resistance to ' mal secco ', it has been found that it is high in plants having attained a certain development, but is fairly weak during the first year following grafting and that it is necessary to protect the plants against wind attack. It is most advisable, therefore, to plant windbreaks and, against the germs of ' mal secco ', effect frequent sprayings with adequate fungicides in spring and autumn.

Mortality of peach trees in Friuli. The investigations carried out by the Royal Station of Plant Pathology at Rome show that this mortality is not all caused by the intense winter cold of the last few years, but that it is a pathological phenomenon, known today as ' leptonecrosis ', disease also occurring on cherry, apricot and plum trees. It is not of parasitic origin. Studies on the aetiology of the disease are being continued.

Willow canker. The conidial form (*Gloeosporium*) of *Physalospora miyabeana* Fukushi is new to the mycological flora of Italy. It was found on a specimen of *Salix babylonica* L. in Villa Borzino at Busalla, Genoa, by Prof. Biraghi of the Royal Station of Plant Pathology at Rome.

SWITZERLAND.

Advance of the Colorado Beetle (*Leptinotarsa decemlineata*) *

Situation on August 1, 1942.

The July weather, generally warm and dry with some intermittent rains, continued to favour the development of the Colorado beetles in the fields, particularly during the first half of the month.

In the French cantons, according to the reports of the cantonal experts, the situation is approximately as follows:

Genève. Invasion is much more intense and widespread than in preceding years, but owing to the treatments carried out successfully throughout the canton, the primary foci were destroyed practically everywhere. In small fields, collection or the use of dusts also gave good results. At present scouting is advocated wherever it is possible to collect and destroy the perfect insects.

Vaud. During the course of July, especially from the 1st to the 15th, after visits of school children to the fields, the Colorado beetle was reported in a further 111 communes, bringing the total of communes attacked up to 327 (against 354 at the end of July, 1941). In the Jura, following treatment, only a few adult larvae were found here and there. The invasion reported in certain regions, Rhône

* Communication from the Federal Experiment and Seed Control Station, Lausanne (Mont-Calme), Switzerland.

Plain, Joux Valley, does not seem to be of much importance. In general, with the exception of the regions where contamination is stationary there appears to be a decline in invasion.

Fribourg. The number of communes contaminated is now 173 with a total of 4863 foci, that is, more than double that at the end of June. As always, the regions of the Broye and the Lake are the most effected, although the invasion has also spread considerably in the districts of Singine and Sarine. In Gruyère, a focus of large larvae were found, after mid July, at Montbovon.

Neuchâtel. The situation has remained fairly stationary; in general, there has even been a slight improvement. Search by school children has revealed here and there numerous foci which were destroyed by appropriate treatment. Some communes were obliged to make treatment compulsory by law, all the fields being more or less infested, although it was not a question of mass invasion. In other communes, like Thielle Wavre for example, the situation is good, as no treatment was necessary after the usual scouting.

Bernese Jura. All the communes are contaminated by the Colorado beetle, but, in general, there would appear to be a regression compared with 1941. A little everywhere the first treatment has been finished, though sometimes effected under unfavourable weather conditions. In the low-lying regions, the adults are found, as elsewhere, along the Jura, in a relatively large number.

Valais. During the month of July, 62 new foci were found, which brings the total up to 189 in 24 communes. Approximately 85 per cent. of these foci are found in the lower part of the canton between St Maurice and the borders of the lake; the remainder is distributed chiefly in the centre of Valais, along the Rhône Valley; isolated foci were also found at Tourtemagne, Viège and Rarogne. Scouting ordered in the Vale of Illiez after the appearance of an adult beetle, led to the discovery, at the beginning of July, of several small foci near Champèry. It is thought that the insects arrived in the region on June 7, at the time of a violent storm with very strong wind, coming from France through the region of the mountain passes; in fact, foci were found near the locality and right along the bottom of the valley, in the direction of the passes, while none were found in the rest of the valley. All these foci, as well as a new small focus of larvae discovered near Bovernier above Martigny, were immediately given the arsenate treatment.

In French Switzerland, the situation on August 1, 1942 may be summed up as follows:—

Canton	Communes attacked	Number of foci
Genève	45	widespread
Vaud	327	widespread
Neuchâtel	62	widespread
Bernese Jura	146	widespread
Fribourg	173	4863
Valais	24	189
Total in French Switzerland	777	widespread

The extent of infestation in German Switzerland is as follows:—

Canton	Communes attacked	Number of foci
Bern (excluding Jura)	259	5741
Solothurn	111	3456
Basel	66	2149
Argau	175	3573
Luzern	74	504
Schwyz	20	294
Unterwald	13	69
Zug	10	63
Zürich	103	1214
Schaffhaussen	24	218
Thurgau	37	46
Glarus	10	13
St.-Gallen	38	261
Total in German Switzerland	940	17601

Four cantons, therefore, were free from attack this year (Uri, Appenzell, Graubünden and Ticino; the number of cantons infested and of foci is lower than last year up to August 1.

From these various reports, for French Switzerland, an unusual but comforting conclusion may be drawn. While the abundant emergence of adult insects in May and the exceptionally favourable weather in spring and at the beginning of summer made it seem likely that, this year, an extraordinary development of the insect would occur, and although the invasion was, in general, more intense and more widespread than in previous year, the situation at present is relatively rather favourable and, in many regions, there is even a slight decline as compared with the same period last year. The cause may be found in certain natural occurrences, which undoubtedly, in part, had some effect: the late planting of potatoes in many regions, due to present circumstances, produced a greater dispersion of the adult insect in search of food; the rapid growth of the plants, favoured by the warm weather, made them, to a large extent, more resistant to attack, the late plants, weakened or situated along the edges of the fields having been more generally invaded; the greater dissemination of the invasion has, is some degree, weakened its force locally. The cause, however, may be looked for chiefly in the treatment of the fields which it has been possible, practically everywhere, to carry out at an appropriate moment with regularity and under good conditions. Attention should be called to the willingness, in general, of all concerned, local agents and farmers, in carrying out effectually the treatments in questions. Whenever it was found necessary, arsenical spraying was repeated or dusting with rotenone-containing powders or Gesarol effected.

This year, a more decided division than usual between the generations was noted. It was still possible to observe, here and there, throughout the month, plants supporting at one and the same time, adult insects, eggs and larvae of all ages. In general, however, from the beginning of July, a progressive diminution in adults and egg-laying could be seen. According to our observations, made chiefly in the Plaine de l'Orbe, towards the middle of the month, chiefly large larvae in the 4th stage and now and then only small colonies of larvae in the 3rd stage or more rarely in the 2nd stage were found. From the middle of the July, adults of the summer generation appeared more and more numerous in the fields. After July 20, the large larvae were numerous, a well as adult insects and some oviposition, but it was difficult to find the young larvae. Finally at the end of the month, the greater part of these large larvae had gone underground.

At present, there are many adult insects and if the weather continues to be favourable, it is possible that, this year, we will have a larger second generation than in previous years. Up to date, probably owing to the dry weather, very few eggs have been deposited, and the potato crops being well advanced, the harvests are not threatened. Control, however, must not be abated if it is desired to prevent too large a number of adult insects wintering over the season and attacking our fields the following year. The most effectual measure for the moment is to organize scouting operations for the purpose of collecting and destroying as many adult insects as possible. According to the climatic conditions of the next weeks, further treatments against the larvae will perhaps be indispensable and will have to be ordered at the end of August or at the beginning of September.

Situation on September 1, 1942.

Although during August, the weather continued to be fine and warm for the most part. the invasion of the Colorado beetle dropped appreciably in intensity. In French Switzerland, the situation, according to the reports of the cantonal commissioners, is as follows:

Genève. The foci reported this month (August) were few and of limited importance. In the fields where the potato tops are still green for some fifteen days further egg-masses and larvae (probably of the 2nd generation) have been found in fairly large numbers. Adult insects, very likely carried from France by the south winds, are reported to some extent everywhere.

Vaud. Reports following scouting of the potato fields by school children show that invasion of the second generation is not of much consequence and even less intensive than last year. In some regions of the Orbe Plain, Basse Broye and at the foot of the Jura, many insects were found and some foci of larvae were discovered.

Fribourg. Few fresh cases were reported during the month, save in the district of Singine where several foci of larvae were discovered at the beginning of August. Up to date (September 1) 179 communes have been attacked, the number of foci being 5013.

Neuchâtel. Scouting by school children showed that there was an appreciable improvement in the situation. The second generation did not develop as rapidly as was expected, and, during the second week of August, it was only in six communes of the low-lying regions that some foci of larvae were reported and destroyed.

Bernese Jura. Arsenical treatment, which has had an effective and prolonged action, and collecting of the insects, which led to the destruction of some tens of thousands of insects in one commune only, have greatly improved the situation. The second generation only came to full development in certain communes of the low-lying valleys.

Valais. The total number of foci reported to date amount to 207 in 27 communes; the 18 new foci discovered during August are distributed along the Rhône valley, and in the communes of Vourvry, Monthey, Granges, Agarem, Niedergesteln and Steg.

In August, the second generation of Colorado beetles developed to some extent everywhere, but, according to region, very irregularly. As in previous years, in general, it was weak; this year, however, it suffered chiefly from the prolonged dry season which seems to have an appreciable effect on the extent of oviposition. In the regions where adult insects had been particularly abundant, however, foci of larvae in all stages of development were found here and there. At the end of August chiefly the crops of late varieties were the most severely attacked, and, for example, fields at Ackersegen which, a month ago appeared entirely free from the pest, were found to be heavily attacked. The presence among these second generation larvae of large ones ready to burrow into the ground, indicated the possibility of, at the very least, the appearance of a third generation. It is probable, however, that the majority of the larvae which are now changing or about to be changed into the perfect stage, will remain in the ground until next spring.

It is also observed that a large number of adult insects of the spring and summer generations, owing, to the drought, have already started hibernating in the soil.

In order to diminish as much as possible the danger of attack by this new generation, scouting, mostly by school children, has been ordered more or less everywhere during the second half of August and the beginning of September. Inspection of the potato fields confirmed the efficacy of early treatments and led to further general or isolated treatments as was required

It may seem abnormal to order further control operations in the fields, not long before harvesting the potatoes. It should be remembered, however, that the destruction of thousands of larvae and adult insects at this moment before they disappear into the ground, will thus destroy the swarms of adult insects which will return to invade the fields at the beginning of the next spring.

The conscientious work and careful vigilance carried out at the end of the 1942 season will assure the relative security of the 1943 potato crops.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Germany. — An Ordinance of October 10, 1942 relative to the distribution of fungicides and insecticides containing copper or copper substitutes lays down that the products in question will only be delivered on presentation of a special permit granted to persons authorized to obtain supplies in the quantity stated on the said permit. The Ordinances of January 3, 1941 and October 10, 1941 [see this *Bulletin* 1942, No. 3, p. 39] are rescinded. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang November 1942, 22. Jahrg., Nr. 11, S. 73).

Germany (Government General). — A Decree dated October 15, 1942, introduces into Galicia the provisions of the Decree of July 21, 1941 relative to the training of persons desirous of exercizing the calling of pest control operator [see this *Bulletin* 1942, N°. 4, p. 56]. (*Nachrichtenblatt für den Deutschen Pflanzeschutzdienst*, Berlin, Anfang November 1942, 22. Jahrg., Nr. 11, S. 74).

Germany (Occupied Territories). — There has been in operation since July 1, 1942 a Plant Protection Department for the Government General at Cracow.

As regards the Ukraine, the central Plant Protection Service has been established at Kiev. (*Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin, Anfang Oktober 1942, 22. Jahrg., Nr. 10, S. 67).

Belgium. — Ordinance No. 8/42 dated November 19, 1942, concerning the regulation of certain products noxious in farming, prohibits merchants in fertilizers, wholesalers or retailers, recognized by the ' Matières premières pour Agriculture ' Association, approved representatives of these merchants as well as authorized agents to keep for the purpose of sale, to offer for sale or to sell the following products: magnesium sulphate, iron sulphate, sodium nitrite, sodium sulphate unrefined kitchen salt, zinc sulphate or sodium chlorate. (*Moniteur belge*, Bruxelles, 23 et 24 novembre 1942, nos 327-328, p. 6917-6918).

Spain. — An ' Orden ' of November 12, 1942 contains the measures regarding the locust control campaign. (*Boletín Oficial del Estado*, Madrid, 16 de noviembre de 1942, año VII, núm. 320, pág. 9285).

Italy. — The Ministerial Circular No. 88 of November 10, 1942, referring to Ministerial Circular No. 14, dated February 5, 1941 [see this *Bulletin*, 1941, No. 5, pp. 97-98], again requests the Phytopathological Observatories, as well as the Research and Scientific Experiment Institutes for Phytopathology, to collaborate closely towards the *International Bulletin of Plant Protection*.

Original and unpublished reports, particularly as regards discoveries and current events in the country, prepared by the staff of these institutions, will be transmitted to the International Institute of Agriculture by the Plant Pathology Station at Rome, official correspondent to the Institute *.

* Communication from the Ministry of Agriculture and Forests, Rome.

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[I. – Parasitic diseases: *Piricularia oryzae, Helminthosporium oryzae, Sclerotium oryzae, Bacillus oryzae, Sclerospora oryzae, Fusarium graminearum, F. moniliforme, Tilletia horrida, Ustilaginoidea virens, Nigrospora oryzae, Entyloma oryzae.* II. – Non-parasitic diseases. III. – The problem studied from the genetic standpoint.
The rice blast which now appears in rice-fields has a symptomatology common to various diseases differing owing to origin and cause. Among the causes, mention may be made of (*a*) parasitic (*Piricularia, Helminthosporium, Sclerotium*); (*b*) climatic (low temperature, hot winds at the time of flowering); (*c*) edaphic (anaerobia, excessive nitrogen, etc.); (*d*) different factors (temperature and the pH of the water in the rice-field, of the soil, etc.)].

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Lezione II. — Generalità sulle malattie crittogamiche (V. Bongini).
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Lezione V. — Malattie crittogamiche dei peri e dei meli (G. Della Beffa).
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Lezione VII. — Malattie crittogamiche dei frutti a nocciolo (G. Della Beffa).
Lezione VIII. — Insetti dannosi alla vite (G. Della Beffa).
Lezioni IX-X. — Malattie crittogamiche della vite (V. Bongini).
Lezione XI. — Malattie non parassitarie delle piante da frutto (O. Servazzi).
Lezione XII. — Insetti dannosi e malattie dei cereali (G. Della Beffa).
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